

Notes on the Butterflies of Corsica, 1972

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Further up the valley, where a stream from Monte Rotondo joins the Restonica, we saw many specimens of *Fabriciana elisa*, which is endemic to Corsica and Sardinia. The altitude was perhaps over 1000 m and the habit of the butterfly much more than that of a woodland form as one would expect of *A. paphia* at home. Bretherton and De Worms noted that *F. elisa* was beginning to decline in numbers by August 2nd but the specimens we took on August 12th were very fresh in appearance. We followed the stream up a little way from the road and there *F. elisa* and *A. paphia* were flying together and settling on rocks in the stream, being particularly attracted to large dark-centred daisy-like Compositae. Thus *F. elisa* was apparently absent from the lower more open part of the valley and we saw no *P. pandora* higher up.

In the nearby Gorges du Tavignano just out of Corte we again encountered *Limenitis reducta* flying in the partially dried-out river bed and also *Brintesia circe*.

Vizzavona was disappointing. The tiny hamlet, consisting mostly of hotels, is situated in a clearing in the forest and the station yard is noted by Bretherton and De Worms as being particularly good collecting. We took only one very worn *P. c-album* although *Pyronia tithonus* was present. Another worn *P. c-album* was taken in a small roadside clearing near our camp in the pine and chestnut forest. The two specimens seem to have been representative of the first brood unlike those seen at Calvi (see below).

Pararge aegeria was also present in the forest, but the only numerous species we saw was *A. paphia*. One group of bramble thickets bordering a woodland path had many specimens including one or two f. *valesina*.

More profitable than Vizzavona itself was a trip on August 16th to the village of Bocognano, some 10 km. SW of Vizzavona. There in a field adjoining an abandoned orchard *A. paphia* was again common and we took a good *valesina* specimen. *Brintesia circe* was also very numerous and *Hipparchia aristaeus* was common. We took one specimen of *Colias crocea* f. *helice* (again as at Calvi the only specimen of the species we saw) and *Hipparchia neomiris*. We also took two specimens of *Iphiclides podalirius*, a badly worn and tattered female and a male in fresh condition. They must surely have represented different generations, but the female, like that from St. Florent, was too worn to confirm the characteristic pale yellow colour of the first brood.

We were disappointed that we did not knowingly see *Papilio hospiton* Gene during our stay on Corsica. We saw several *Papilio* swallowtails from the car but usually at low altitudes and it is almost certain that they were *P. machaon*.

We looked for *P. hospiton* on open slopes with fennel near Corte but in vain. We also did not see two other notable endemic forms *Pieris napi dubiosa* Rober and *Aglais urticae ichnusa* Hb. In the case of the latter we were almost certainly between broods, but like Bretherton and De Worms, we failed to find any larvae or pupae on nettles (or these of *Inachis io*).

Our list of species taken or seen is as follows:

<i>Papilio machaon</i> L.	<i>Pararge aegeria</i> (L.)
<i>Iphiclides podalirius</i> (L.)	<i>Lasiomatta megera</i>
<i>Leptidea sinapis</i> (L.)	<i>paramegaera</i> (Hb.)
<i>Pontia daplidice</i> (L.)	<i>Coenonympha corinna</i> (Hb.)
<i>Pieris rapae</i> (L.)	<i>Coenonympha pamphilus</i> (L.)
<i>Pieris brassicae</i> (L.)	<i>Pyronia tithonus</i> (L.)
<i>Gonepteryx cleopatra</i> (L.)	<i>Maniola jurtina hispulla</i>
<i>Gonepteryx rhamni</i> (L.)	Esper.
<i>Colias crocea</i> (Geoffrey)	<i>Brintesia circe</i> (Fabr.)
f. <i>helice</i>	<i>Hipparchia aristaeus aristaeus</i>
<i>Charaxes jasius</i> (L.)	(Bonelli)
<i>Limenitis reducta</i> Staudinger	<i>Hipparchia neomiris</i> (Godart)
<i>Issoria lathonia</i> (L.)	<i>Lycaena phlaeas</i> (L.)
<i>Fabriciana elisa</i> (Godart)	<i>Syntarucus pirithous</i> (L.)
<i>Argynnis paphia immaculata</i>	<i>Celastrina argiolus</i> (L.)
Bellier	<i>Plebejus argus corsicus</i>
<i>Pandoriana pandora</i> (Schiff.)	Bellier
<i>Vanessa cardui</i> (L.)	<i>Aricia agestis</i> (Schiff.) f. <i>calida</i>
<i>Vanessa atalanta</i> (L.)	<i>Polyommatus icarus</i> (Rott.)
<i>Polygonia c-album</i> (L.)	<i>Carcharodus alceae</i> (Esper)

Discussion

Two characteristic features of the Corsican butterfly fauna are emphasised by Bretherton and de Worms, the paucity of species and the high proportion of endemic species and sub-species. The endemic forms are generally not confined to Corsica but are endemic to the land surrounding the Tyrrhenian Sea, i.e., Corsica, Sardinia, Elba and the lesser islands and occasionally mainland Italy and Sicily.

Argynnis paphia immaculata Bellier is a very characteristic endemic sub-species differing from *A. paphia paphia* in the reduction of the "silver-washing" in the females and its virtual loss in the males (Bretherton and De Worms, 1963), a general reduction in the upper hind wing pattern but a golden suffusion and often a somewhat darker postdiscal area with better defined spots. It is endemic to Corsica, Sardinia, Elba and Giglio with transitional forms reported from Sicily and elsewhere (Higgins & Riley, 1970).

There was considerable variation in the few specimens we took. Of three males, all from Corte, two lack the silver wash but differ from one another in the distinctness of the under hindwing lines and post-discal spots; the third has the silver wash developed to some extent but not to the degree seen

in typical English specimens. Found elsewhere, it would probably be regarded as transitional. The same type of variation is visible in the females. One fine large normal female from Vizzavona has the silver washing as well developed on the discal and postdiscal stripes as most English females. Three other normal females (all from Corte) continue as a graded series, the last having virtually no silver. Three *valesina* females show a similar range. However, all the Corsican specimens of both sexes lack the pale lilac background in the postdiscal and marginal areas seen in English specimens and have a general greenish-gold background over the underside of the hindwings.

We noted, as did Bretherton and De Worms, that the commas, *Polygonia c-album*, appeared rather like the British spring brood form *hutchinsoni*. This applied particularly to the two probably first brood specimens from Vizzavona which had even more reduced upper markings than *hutchinsoni*. However, even 5 fresh specimens from Calvi, while varying in their fulvous colour from almost as pale as the Vizzavona specimens to a colour approaching that of English summer forms, had pale *hutchinsoni*-like underwings. Only the specimen caught in the trap at Calvi had the very dark brown undersurfaces seen in second brood English forms.

Like Bretherton and De Worms, we could see little difference between the *Pararge aegeria* of Corsica, listed by them as *P. a. sardoa* Verity, and typical *P. argeria aegeria* from southern France. Our Corsican specimens are perhaps more heavily marked. However, our one female *L. megera paramaegera* is very distinct from the type subspecies, with the forewing postdiscal striae absent behind the middle S2.

Our specimen of *Coenonympha pamphilus* seem to accord better with form *latecana* Verity (*vide* Higgins & Riley) than with the western Mediterranean *C. pamphilus lyllus* Esper of Bretherton and De Worms, Corsican list.

By far the most interesting case of intraspecific variation concerns our specimens of the Corsican Heath *Coenonympha corinna* Hb. Unfortunately we did not appreciate the significance of this until we had left Corsica, and we collected only half a dozen specimens. The species is normally divided into two subspecies, *C. corinna corinna* (Hb.), endemic to Corsica and Sardinia, and *C. corinna elbana* Staudinger from Elba and the Italian mainland.

The difference between the two subspecies parallels that between the extremes of the related *C. tullia* whose three indigenous subspecies form a stepped N.-S. cline in Great Britain (Ford, 1957, Higgins & Riley, 1970). Typical *C. c. elbana* is distinguished from *C. c. corinna* by the number and development of the postdiscal ocelli, particularly on both sides of the hindwing. Typical *elbana* have 3 blind ocelli on the upper hindwing of which two are very poorly developed. On the under surface there are open ocelli in S1, s2, s3, s4 and a large one in s6. There is usually also one in s5.

In *C. c. corinna* the spot pattern is much reduced. There is rarely more than one spot on the upper hind wing. The ocelli on the lower hind wing are very variable but if developed usually confined to s2, 3, 4 and 6. Occasionally, however, specimens occur from Corsica with ocelli in s1 and s5.

Our specimens from Corsica have one ocellus or none on each upper hindwing together with the irregular pale post-discal band characteristic of *C. c. corinna* below, but in the pattern of under hindwing ocelli they fall clearly into two groups. The three highland specimens, all from the Restonica valley, are typical Corsican forms, with minute ocelli confined to s2, s3, s4. The lowland specimens on the other hand (2 from St. Florent, 1 from near Calvi) approach the *albana* condition. A large male from St. Florent has under hindwing ocelli at all six sites (including s1b and s5), although these are not so large as in typical *albana*. There is also a second ocellus anterior to that on the under forewing, often found in *albana*. The other two, both females, lack the s5 spot and the second forewing ocellus, but have a vestigial s1 spot.

One of us (A.L.P.) recently had the opportunity to inspect all the specimens of *Coenonympha corinna* in the British Museum (Natural History) in both the national and Rothschild collections. Of some sixty specimens from Corsica only two specimens had ocelli on unh. s1 and s5. Both unfortunately were unlocalised. The only specimen bearing 3 spots on each up.h. was from Ajaccio and thus probably a relatively lowland specimen.

No other specimen in the Museum has data indicating that it was from a lowland locality but many came from the central mountain regions.

Our sample is obviously ridiculously small, but systematic collection over the whole island might establish that the lowland specimens approach the *albana* condition whereas those from the central mountains are typical or extreme *corinna*.

We have also, of course, sampled only one of the two annual broods and many other explanations of the differences between our tiny samples are possible, but the idea of an altitude-dependant cline is appealing. We hope to return to Corsica in the not too distant future to investigate this problem fully.

Acknowledgements

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References

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Notes and Observations

FLIGHT HABITS OF *HYDRIOMENA FURCATA* THUNB. (LEP. : LAREN-TIINAE).—I have just re-read an appeal by W. C. Minnion (in *Ent. Rec.*, **71**: 87), for records of the daylight flight of "The July High-flier" (*Hydriomena furcata* Thunb.) which appears to have different flight-habits depending on the locality and to fly by day in West England but only by night in East England.

Here, about midway along the North French coast, it does both, and in some spots is very active by day. It is a common woodland species here; there are some woods on level plateau, but most are on valley slopes too steep for cultivation. These steeply sloping, very shady woods, are often coppiced and have very scanty undergrowth; the trees are of many deciduous species, but where the following observation was made were *Salix*, *Betula*, *Fraxinus*, *Quercus* and *Fagus*, mostly tall, close-growing, with a high leafy canopy and few lower branches. On 13th July 1969, on a hot summer's day, in the deepest shade of such a wood, on a steep north-west facing slope, large numbers of this moth were seen flying and samples were caught for identification; they were commonest on the lower half of the slope. The moth also comes commonly to light in July in all woodland habitats, whether flat or sloping, in this region—E. P. WILTSHIRE, 23, av. Foch, 76600, Le Havre, France. 20.iii.1973.

HYLES EUPHORBIAE L.: SPURGE HAWK IN SURREY.—I had the great good fortune to take a perfect male of *Hyles euphorbiae* L. in my garden trap this morning. Following a very warm day the wind was S.E. light and the sky clear. Minimum night temp. 52°F.—E. H. WILD, 112 Foxearth Road, Selsdon, Surrey. 27.v.1973.

PHAEOMYIA FUSCIPENNIS MG. (DIPTERA: SCIMYZIDAE) IN NOTTINGHAMSHIRE.—A small dark-winged Sciomyzid, new to me, that alighted on our living room window at Stapleford during lunch on 12.vii.1972, traces to *fuscipennis* Mg. in Knutson & Lyneborg (1965), Danish Acalypterate Flies, **3**: *Sciomyzidae*. and apparently was not previously known from Notts. It is a female. — O. M. WHITE, 6 Northwood Street, Stapleford, Nottingham. 22.v.1973.